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A Study on Personalities Affecting Smartphone Selection Criteria in Vietnam

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Abstract: Our study aims to clarify the simultaneous impact of personality traits and sociodemographicson mobile phone selection criteria. We evaluate the independent effects of gender and age factors affecting mobile phone selection criteria and the combination of two groups to investigate the effect of all factors on the outputs. This study used a survey method of 362 white-collar workers who have had at least one cell phone. The data was described and processed by R-statistics. Analysis of logistic regression and linear regression models wereemployed to access the associations of variables. The research results showed the effects of personality and sociodemographic facets to the mobile phone style choice, the brand name selection and the price acceptance. Because the data were collected only in Ho Chi Minh city, the results may be varied when adding expanding to the different geographical regions or more independent variables. The study helps to have a completed view of South Eastern Asia consumers of the feature and smart phone market here. This is the first study to access the association between personality, age and gender with the price acceptance and is a pioneer to investigate the characteristics of mobile phone consumers in Asia.

Key words: R-statistics, geographical regions, sociodemographic, independent variables, personality traits

INTRODUCTION

According to the mobile phone reports and forecasts in August, 2015 from the IDC (International Data Corporation) Worldwide Quarterly Mobile Phone Tracker, the delivery of smartphone is assumed to reach 1.44 billion units this year. Also, according to another report of IDC, Vietnam has been the fastest growing smartphone market in Southeast Asia in 2014 and supposed to develop strongly in the next few years. What makes a country with only $2,028 GDP per capita, the notable smartphone market? To answer this question, we based on the criteria of consumer behavior of previous research for this study. The personality and sociodemographic (age and gender) factors have been selected as the predictors of the consuming behavior of Vietnamese smartphone users.

Personality and sociodemographicfactors have been widely employed in previous research to understand the behavior of consumers because they distinguish an individual with another in the active interaction with others and external environment (Heinstrom, 2003). NEO Personality Inventory-Revised (i.e. the big Five Factors) has been widely selected for years as the most solid measure to identify personal characteristics by scholars, marketers and other pros of both social and psychological sciences (Ross *et al*., 2009, Skues *et al*., 2012). Many previous studies were also interested in learning about gender and age differences in psychology and have pointed out the differences in sex and age resulted in the differences of mental health, cognitive abilities, personality and so on (McCrae *et al*., 2004, Lippa, 2005). Although there have been studies discovering the relationship between personality and the use of mobile phone (Roberts *et al*., 2015, Krieger *et al*., 2015, Park and Han, 2013), very few studies ever exploredthe personality, gender and age in association with users' mobile phone selection criteria. Our current study used personality traits (including Extraversion, Conscientiousness, Neuroticism, Agreeableness and Openness), Age and Gender as predictors of the cell-phone choice,brand name selection and price acceptance.

Literature review: In the assessment model of personality, the Big Five model has been most widely used. This model has been constantly improved and become a popular tool to measure individual personality, since it was born. The big five model was first named by Goldberg (1990) and derived from the lexical approach of

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Allport and Odberg and many other supporters, since 1940s (Pervin and John, 1999). Many studies have suggested that the Big Five Model was the most established instrument for personality research (Merz and Roesch, 2011). In this study, we continued to take 50 questions to consider the personalities of mobile phone users. These questions were based on the big five evaluation questionnaire of Goldberg (1990) and could be answered completely within 5 min.

From very early, the buying behavior of customers was assessed to get closer to customer insightby relying on the personal traits and previous and later studies consistently agreed to the natural effect of personality on one's responses to the outside environment. Marketing mix (first mentioned by Kotler and Zaltman, 1971) is one of the key concepts of traditional marketing and modern marketing, referring to the four factors (Product, Promotion, Price and Place) that are important elements of marketing mix and almost affected by the attentiveness and recognition of consumers as mentioned in marketing concept of market orientation. Orth *et al*. (2010) pointed out the differences of gender and personality of customers strongly influenced their feelings, perception and selection of products and brands during the buying decision making process. So far, the studies of the impact of personality and sociodemographic factors have beenceaselessly interested by scientists and practicians in Marketing field, such as the interest in the effect of these factors on impulse buying (Badgaiyan and Verma, 2014, Lucas and Koff, 2014), ononline buying and online impulse buying (Turkyilmaz *et al*., 2015, Bosnjak *et al*., 2007) or even on shoplifting of unethical consumers (Egan and Taylor, 2010)

The brand loyalty to a product always creates brand value when the product is more preferred and purchased repeatedly. The brand loyalty was described by Aaker (1997) as the association of personalities with a product (a brand) to shape the brand personality. Several studies later have attempted to explore the influence of each individual dimension of traits to the brand loyalty of clients and many research models for the measurement supporthave been developed. Sung and Tinkham (2005) demonstrated that there were many similarities in brand personality but remained differences in cross culture; Chang and Chieng (2006) developed models to evaluate the effect of individual and share experience to brand personality, Aaker (1997), Geuens *et al*. (2009) and Tunca (2014) have constructed some models for the estimation of cross culture influences to brand personality and compared the effectiveness of models. Even so, no research ever studied the differences of buying behavior of a group with similar characters in the consumption of different brands. In this study, we have considered the influence of personality and sociodemographicsto the smartphone selection criteria such as mobile phone type selection, brand name decision and price acceptance of mobile phone users. Since then, the hypotheses have been proposed.

- H_1: a choice between smartphone and feature phone of an individual is affected by the type of personality and sociodemographic of that person
- H_2: the selection of smartphone brand name is affected by personality and sociodemographic of that person

Although, many studies have confirmed that the impact of personality to social behavior is clear and strong (Krieger *et al*., 2015) and also a lot of research has been done trying to find out the relationship between personality and purchase behavior (Egan and Taylor, 2010) to our knowledge, still very few studies have explicitly explored the impact of personality to the price acceptance of consumers. Economists have defined the price as the highest amount that buyers are willing to pay for the item or service they want to buy (Stigler, 1971, Friedman, 2007) and they have also demonstrated the effect of buyers' consumption experience on prices (Wakefield and Inman, 2003). Jacoby *et al*. (1971)showed that the price factor was driven by customer's perception and decidedthe customer satisfaction after consuming a product or service. Johnson *et al*. (1995) also mentioned that price is a factor that impacts to the expectations and attitudes of customers. The cognitive factors, expectations, consumption experience of consumers have been proved to have association with consumers' personality (Schermer and Dougall, 2013, Holbrook and Hirschman, 1982). Therefore, we considered how personality affected the price acceptance of consumers through the hypothesis below:

- H_3: The price acceptance in mobile phone consumption is affected by personality and sociodemographic

MATERIALS AND METHODS

Data and measurement

Sources of data: To eliminate the influence of occupation, education and income factors to the consumption and use of smartphone, samples in this study were 362 employees randomly selected from the white-collar officials in Ho Chi Minh City, the largest economic center of Vietnam and the most influential place to the smartphone consumer report

Table 1: Smartphone user sociodemographics

Variable	Frequency	Percentage
Gender		
Male	198	56.57
Female	152	43.43
Age		
<20	18	5.14
20-29	94	26.86
30-39	107	30.57
40-49	71	20.29
50-59	26	7.43
>60	34	9.71

N = 350

of Vietnamese market by IDC. The 350 samples remaining after the removal of invalid answer sheets for personality investigations were employedfor this research.100% of respondents are aged over 18 and have used at least one mobile phone. Participantsin the research were asked to answer an answer sheet consisting of 50 questions for personality identity which were based on IPIP Big-Five sets of Factor Markers (Goldberg, 1990) and the accompanying questions of age, gender, type of device, brand name and price of mobile phone devices. Samples consisted of 43.43% of women and 56.57% of men as described in Table 1.

Measure

The big five, gender and age: As mentioned above, the big five test questions are included in the first part of the questionnaire and measured by the 50-item scale set of IPIP (Goldberg, 1990) which consists of fifty questions and has been converted English version into a Vietnamese copy. Each question is ranked on a five-degree scale: disagree, slightly disagree, neutral, slightly agree and agree. Scores of participants range from a low of 1 to a high of 5 and decide the trends of personality including extraversion, neuroticism, agreeableness, conscientiousness or openness to experience. Sociodemographics consist of Gender (0 = Male, 1 = Female) and Age in 6 groups (below 20~group 1, 20-29~group 2, 30-39~group 3, 40-49~group 4, 50~59 ~ group 5, >60~group 6). The questions of gender and age of participants; type, brand name and price of mobile phones were added to collect the information of sociodemographics and smartphone selection criteria.

The selection of mobile type, brand name selection and price acceptance: The first variable (namely Type selection) is a binary variable with 0 for the feature phone users and 1for the smartphone owners. The next variable is the brand name selection criterion which comprises 12 levels: 1 = Masstel, 2 = HKPhone, 3 = Lenovo, 4 = Asus, 5 = LG, 6 = Oppo, 7 = HTC, 8 = BlackBerry, 9 = Sony, 10 = Samsung, 11 = Nokia, 12 = Iphone. The last dependent variable is price which was coded in 7 classes: below US100$~1, US100$-US149$~2, US150$-US199$~3, US200$-$249US~4, US250$-US299$~5, US300$-US349$~6, ≥US350$~7. Description of these variables is presented in Table 2.

Table 2: Smartphone selection criteria

Variables	Frequency	Percentage
Type		
Feature phone	47	13.43
Smartphone	303	86.57
Brand name		
Masstel	5	1.43
HKPhone	3	.86
Lenovo	5	1.43
Asus	4	1.14
LG	14	4.00
Oppo	5	1.43
HTC	17	4.86
BlackBarry	25	7.14
Sony	26	7.43
Samsung	61	17.43
Nokia	71	20.29
Iphone	114	32.57
Price*		
<100	26	7.43
100-149	32	9.14
150-199	25	7.14
200-249	64	18.29
250-299	60	17.14
300-349	65	18.57
≥350	78	22.29

N = 350, Price was converted from VND to USD

Data analysis: R-Statistics was employed for the analysis of our study. Step 1, we used logistic regression models to examine the Type selection as this is a binary variable. Within the scope of this study, we only care about whether or not the influence possibility of personality and sociodemographics to the useof smartphones. Therefore, we do not discuss the value of Odd and Odd Ratio (OR) in the results of the logistic regression models. The Akaike Information Criterion (AIC) was calculated for each measurement model of logistic regression to assess the suitable level for the measurement of independent variables. Next, we used linear regression models to test the effect of predictors to Brand name and Price acceptance. Two models with the differences in the number of variables are used in turn to consider the isolated impact of sociodemographic variables and the sequential effects of personality and sociodemographics on predictors. The VIF was tested to examine the multicollinearityamong variables in linear regression models.

RESULTS

Some implications from the descriptive results: Table 1 shows that the largest number of participants aged 30-39,

Table 3: The description and correlation matrix

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
Extraversion	3.45	0.74	-									
Conscientiousness	3.38	0.64	-0.39	-								
Neuroticism	3.39	0.71	-0.61	0.50	-							
Agreeableness	3.46	0.52	0.36	-0.19	-0.24	-						
Openness	3.47	0.71	0.69	-0.39	-0.53	0.38	-					
Gender	0.43	0.50	0.01	0.06	-0.05	-0.05	-0.04	-				
Age	3.27	1.33	-0.20	0.18	0.11	-0.09	-0.23	0.06	-			
Type selection	0.87	0.34	-0.33	0.38	0.40	-0.01	-0.33	-0.04	0.20	-		
Brand name	9.87	2.52	0.41	-0.20	-0.29	0.16	0.36	-0.10	-0.15	-0.29	-	
Price acceptance	4.73	1.87	0.54	-0.45	-0.55	0.18	0.56	0.03	-0.26	-0.67	0.34	-

*Correlation >±0.10 are statistically significant at p≤0.05

Table 4: Results of logistic regression and linear regression models

		Type selection		Brand Name		Price Acceptance	
Predictors	VIF	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Intercept		3.21***	13.27***	10.95***	6.15***	5.84***	5.85***
Extraversion	2.31	-	-0.04	-	1.00***	-	0.37*
Conscientiousness	1.41	-	0.12***	-	-0.03	-	-0.46**
Neuroticism	1.89	-	0.10**	-	-0.18	-	-0.61***
Agreeableness	1.20	-	0.11***	-	-0.05	-	-0.25
Openness	2.10	-	-0.06*	-	0.44*	-	0.75***
Gender	1.02	-0.03	-0.03	-0.46	-0.48*	0.16	0.15
Age	1.07	-0.04***	0.03*	-0.27**	-0.10	-0.36***	-0.17**
AIC	-	268.00	-	193.00	-	-	-
R^2	-	-	-	0.03	0.19	0.07	0.45
Adjusted R^2	-	-	-	0.03	0.18	0.06	0.44
F-	-	-	5.38**	11.79***		12.4***	40.3***

*, **, ***p≤0.5, 0.1, 0.001; VIF was calculated for each predictor of linear regressionmodels; p-value is subjected to z value in logistic regression models and t-value in linear regression models

accounting for nearly 31% of those polled. Although, the survey was conducted on the white-collar workers in offices in Ho Chi Minh City but there have been people at the age under 20 and over 60 who must have never graduated from colleges or already retired in Vietnam. Table 2 provides some interesting information about the global mobile phone market share among Vietnamese officials. Currently nearly 14% of the officals in Vietnam are still using feature phones. However, out of 303 smartphone users there are 37.62% using the iPhone trade mark which has never produced feature phones. Iphone, Samsung and Nokia are the largest suppliers in Vietnam, accounting for 70.29% of market share.

Correlations among variables: Table 3 describes the mean values, SDs and correlations between variables. Apart from the results of Brand name and Type selection outlined in Section 4.1, the average price of these mobile phones ranges from $200US-$300US. Most of the dependent variables are statistically significantly associated with independent variables. Only pairs: Type selection-Agreeableness, Type selection-Gender and Price acceptance-Neuroticsm are not statistically significantly correlative (r<±0.10).

Test results of hypotheses: Table 4 presents the results of logistic regression model for Type Selection outcome and the results of linear regression models for the Brand name and Price acceptance outcomes. The hypotheses H_1, H_2, H_3 are supported. In logistic regression model to estimate Type selection, AIC of model 2 (= 193), including personality variables, is much lower than AIC of model 1 (= 268), consisting of two variables Age and Gender only. Model 1 describes $\alpha = 3.21$ ($p<0.001$) but only variable Age shows the statistically significant association with $\beta = -0.04$ ($p <0.001$) and variable Gender has no statistical significance. Model 2 presents the significant influence of both personality and sociodemographic variables on dependent variable Type selection.

In the linear regression models to estimate variables Brand name and Price acceptance, R^2 of the 2nd modelsis always higher than $R^2$of the 1st models. The R^2 of the model 2 to estimate the Brand name changes 6.3 times, compared with model 1. Similarly, R^2 in model 2 to estimate the Price acceptance changes 6.4 times, compared with R^2 of model 1. In our study, Gender variable is very weakly correlated with the remaining variables and absolutely insignificantly correlated with outcome Type selection. Although, variable Age correlates with outcomes but explains only 3% of Type selection and 7% of Price acceptance in the linear regression models. VIF of the variables in the linear regression models ranges from 1.02-2.31.

DISCUSSION

The global smartphone market is spreading and growing very quickly. Southeast Asian market is seen as one of the most powerful market which has year-over-year growth rate of 65.6%, reaching approximately 24 million units in the first quarter 2015. The study of smartphone consumers' characteristics in Southeast Asia has almost been a gap. Our study has been done in Vietnam which is a Southeast Asia countrywith the impressive growth rate of smartphone market share for years. Findings from the research on white-collar workers in Ho Chi Minh City indicate that there are influences of personality and socio demographics to the selection and consumption criteria of smartphone consumers.

The difference of AIC between the two logistic regression models predicting the mobile phone type selection (decreased 1.3 times in model 2 in comparison with model 1) indicates that the personality variables have had a major impact to the output prediction after being added to the model. The result demonstrates that the differences in personality and age affect the buying behavior between the users and non-users of smartphones, similarly to results of Verplanken and Herabadi (2001) whose findings suggests that the impulsive buying is affected by the personality and influential facets. In contrast to our expectations, gender has not statistically significantly affected the smartphone selection decision of users, this differs from the results of Miguel *et al.* (2015) and may be resulted from the samples working in offices only with similar incomes, jobs and even the academic levels.

Although, all the assumptions are supported, not all predictor variables are statistically significantly affected the outcomes. The extroverts in our research tend to choose smartphones or feature phones randomly. The brand name output has not been significantly influenced by the people whose characteristics tend to be conscientious, neurotic and agreeable.

Furthermore, agreeableness people in linear regression models of this study tend to be indifferent to the price acceptance whereas almost the associations in Table 3 are statistically significant.Thus, when inserted into the regression model, the variables with p-value >0.05 which previously was <.05 in Table 3 may be self-correlated or have intermediate variables that somehow randomized other variables but were not observed in this study. The VIF was calculated during the analyses of linear regression models and its results showed that the multicollinearity has been possibly eliminated. The remaining case is that there are random variables that must have been overlooked because R^2 of linear regression model shows the explanations of only 11.49% on the brand name selection and only 40.3% on the price acceptance. This suggests that there have been other effects affecting the smartphone selection criteria.

CONCLUSION

The models of linear regressions and logistic regression in this research have proven that there are correlations between personality, social characteristics of the smartphone users and the decisions of mobile phone consumptions. This indicates that the role of personality and sociodemographic analysis in assessing customer behavior is still a good choice andcan explain the strong growth of the smartphone industry in Vietnam and Southeast Asia.

LIMITATIONS

Although, this is the first research aiming to understand the smartphone consumers' behavior in Southeast Asia, a leading growthmarket in the world, the study still has a certain number of limitations. First, researchers used data in Vietnam where is still a developing country with low per capita income. Samples were collected only within white-collar officials in Ho Chi Minh City so the study ignored customers who could have average lower incomes as workers, students, farmers or higher earnings as entrepreneurs and traders. Li *et al.* (2016) discussed in their study, personalities are affected by habitat while this study used only samples collected in Ho Chi Minh City so it must have ignored the differences in regional cross cultures.

RECOMMENDATIONS

We suggest that future studies should be repeated by the broader samples collected in different countries or regions and should compare the characteristics of smartphone users in the highgrowth rate market with that of lower growth rate market. Second, the results R^2 in linear regression models of this study disclosed that there should still be other random variables affecting behavior and consumer's choice that have not been discussed in this study, future research should expand the scope of dependent variables such as environmental factors (i.e., advertising, economic growth, national income, political background, social order) to explain much more consumer behavior in smartphone or other technological products. Another factor is that this study has not discussed the features of the phones. For example, smartphone has large amounts of energy consumption. Many customers need

the feature phone handsets because they may have terrible battery lives. Some feature phones may have standby battery time up to weekly or even monthly serviceable lifetime such as Nokia 105, Samsung Brio B313 that conform to the more liberal professions often outside and less time for phone charging. Future studies should consider these factors when analyzing.

REFERENCES

Aaker, J.L., 1997. Dimensions of brand personality. J. Market. Res., 34: 347-356.

Badgaiyan, A.J. and A. Verma, 2014. Intrinsic factors affecting impulsive buying behaviour-evidence from India. J. Retailing Consum. Serv., 21: 537-549.

Bosnjak, M., M. Galesic and T. Tuten, 2007. Personality determinants of online shopping: Explaining online purchase intentions using a hierarchical approach. J. Bus. Res., 60: 597-605.

Chang, P.L. and M.H. Chieng, 2006. Building consumer-brand relationship: A cross-cultural experiential view. Psychol. Marketing, 23: 927-959.

Egan, V. and D. Taylor, 2010. Shoplifting, unethical consumer behaviour and personality. Personality Individual Differences, 48: 878-883.

Friedman, M., 2007. Price Theory. Aldine Transaction Publishers, New Jersey, USA., ISBN: 978-1-4128-0965-8, Pages: 353.

Geuens, M., B. Weijters and K. De Wulf, 2009. A new measure of brand personality. Int. J. Res. Marketing, 26: 97-107.

Goldberg, L.R., 1990. An alternative description of personality: The big-five factor structure. J. Pers. Soc. Psychol., 59: 1216-1229.

Heinstrom, J., 2003. Five personality dimensions and their influence on information behaviour. Inf. Res., 9: 1-24.

Holbrook, M.B. and E.C. Hirchman, 1982. The experiential aspects of consumption: Consumer fantasies, feelings and fun. J. Consum. Res., 9: 132-140.

Jacoby, J., J.C. Olson and R.A. Haddock, 1971. Price, brand name, and product composition characteristics as determinants of perceived quality. J. App. Psychol., 55: 570-579.

Johnson, M.D., E.W. Anderson and C. Fornell, 1995. Rational and adaptive performance expectations in a customer satisfaction framework. J. Consumer Res., 21: 695-707.

Kotler, P. and G. Zaltman, 1971. Social marketing: An approach to planned social change. J. Marketing, 35: 3-12.

Krieger, T., H. Hermann, J. Zimmermann and M.G. Holtforth, 2015. Associations of self-compassion and global self-esteem with positive and negative affect and stress reactivity in daily life: Findings from a smart phone study. Personality Ind. Differences, 87: 288-292.

Li, M., W.H. Mobley and A. Kelly, 2016. Linking personality to cultural intelligence: An interactive effect of openness and agreeableness. Personality Ind. Differences, 89: 105-110.

Lippa, R.A., 2005. Gender, Nature and Nurture. 2nd Edn., Psychology Press Taylor and Francis Group, New York, USA., ISBN: 978-1-410-61294-6, Pages: 327.

Lucas, M. and E. Koff, 2014. The role of impulsivity and of self-perceived attractiveness in impulse buying in women. Personality Individual Differences, 56: 111-115.

McCrae, R.R., P.T. Costa, M.H.E. Kova, T. Urbanek and T.A. Martin *et al*., 2004. Age differences in personality traits across cultures: Self-report and observer perspectives. Eur. J. Personality, 18: 143-157.

Merz, E.L. and S.C. Roesch, 2011. A latent profile analysis of the five factor model of personality: Modeling trait interactions. Personality Individual Differences, 51: 915-919.

Miguel, F.J.P., A.F.A. Peregrina and J.C. Pelaez, 2015. Influences of gender and product type on online purchasing. J. Bus. Res., 68: 1550-1556.

Orth, U.R., K. Malkewitz and C. Bee, 2010. Gender and personality drivers of consumer mixed emotional response to advertising. J. Curr. Issues Res. Advertising, 32: 69-80.

Park, J. and S.H. Han, 2013. Defining user value: A case study of a smartphone. Int. J. Ind. Ergon., 43: 274-282.

Pervin, L.A. and O.P. John, 1999. Handbook of Personality: Theory and Research. 2nd Edn., The Guilford Press, New York, USA., ISBN: 1-57230-695-5, Pages: 727.

Roberts, J.A., C. Pullig and C. Manolis, 2015. I need my smartphone: A hierarchical model of personality and cell-phone addiction. Personality Individual Differences, 79: 13-19.

Ross, C., E.S. Orr, M. Sisic, J.M. Arseneault, M.G. Simmering and R.R. Orr, 2009. Personality and motivations associated with facebook use. Comput. Hum. Behav., 25: 578-586.

Schermer, J.A. and R.M. Dougall, 2013. A general factor of personality, social desirability, cognitive ability and the survey of work styles in an employment selection setting. Personality Individual Differences, 54: 141-144.

Skues, J.L., B. Williams and L. Wise, 2012. The effects of personality traits, self-esteem, loneliness and narcissism on Facebook use among university students. Comput. Hum. Behav., 28: 2414-2419.

Stigler, G.J., 1971. The theory of economic regulation. Bell J. Econ. Manage. Sci., 2: 3-21.

Sung, Y. and S.F. Tinkham, 2005. Brand personality structures in the United States and Korea: Common and culture-specific factors. J. Consum. Psychol., 15: 334-350.

Tunca, B., 2014. Research Note: A Cross-Cultural Validation of Brand Personality Scales in Norway. University of Agder, Norway, Europe, Pages: 422.

Turkyilmaz, C.A., S. Erdem and A. Uslu, 2015. The effects of personality traits and website quality on online impulse buying. Proc. Soc. Behav. Sci., 175: 98-105.

Verplanken, B. and A. Herabadi, 2001. Individual differences in impulse buying tendency: Feeling and no thinking. Eur. J. Personality, 15: 71-83.

Wakefield, K.L. and J.J. Inman, 2003. Situational price sensitivity: The role of consumption occasion, social context and income. J. Retailing, 79: 199-212.